

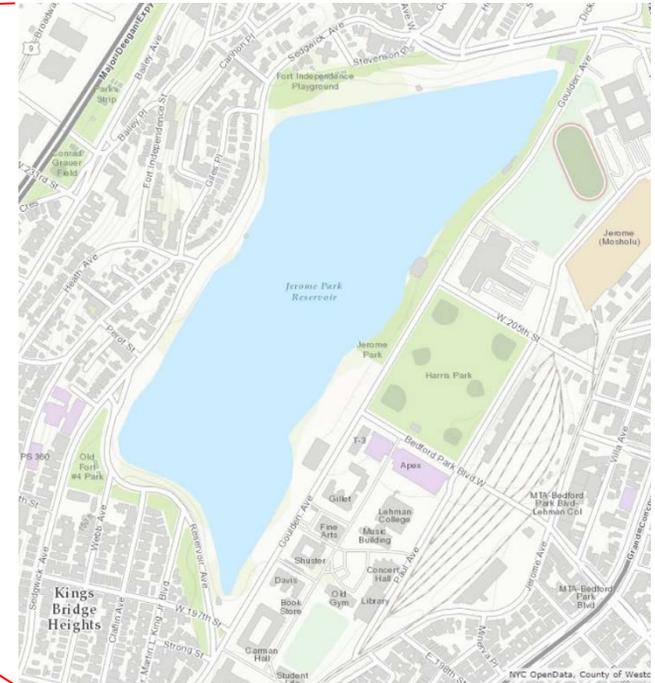


Jerome Park Reservoir & Aqueduct Rehabilitation

Sedgwick Avenue, Goulden Avenue & Reservoir Avenue, Bronx

May 2019

Jerome Park Reservoir



Project Goals

- Repair and upgrade this critical piece of the Croton Aqueduct Water Supply System
- Improve the reservoir's water quality, service level and reliability
- Improve functionality and site safety of the reservoir



Need for Repair: The Old Croton Aqueduct

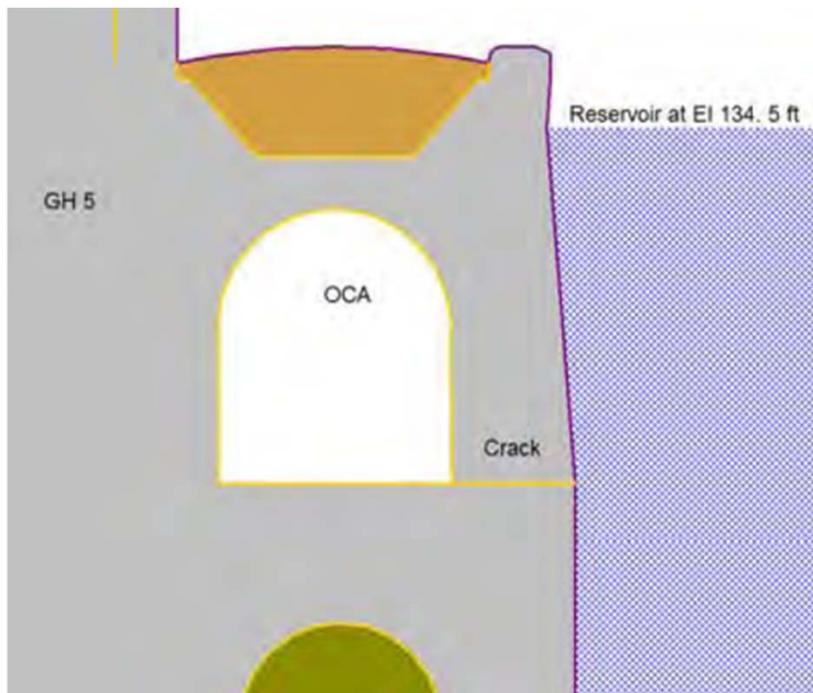


Diagram illustrating crack causing leakage into the reservoir basin

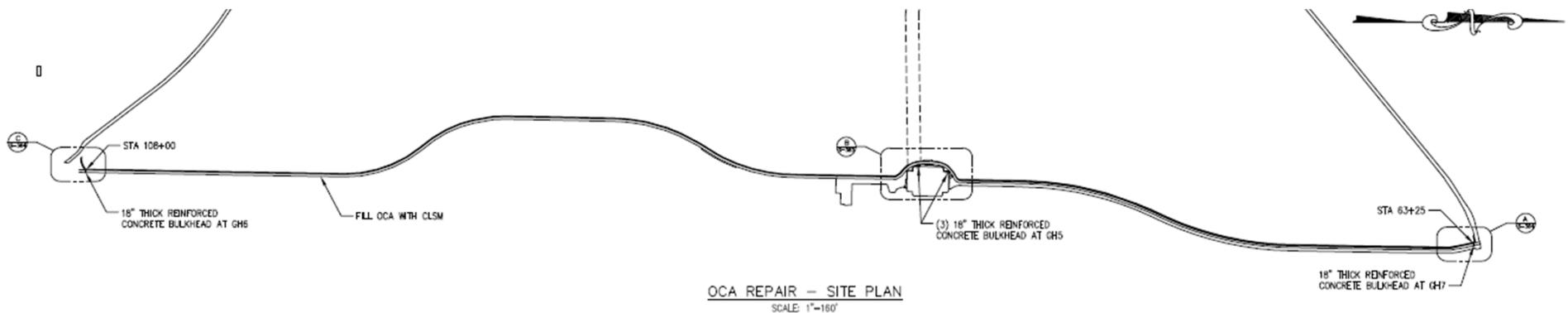
Photo of Old Croton Aqueduct interior

(Source: Jerome Park Reservoir Inspection – Final Inspection Report, Leakage Analysis, John P. Picone, Inc. & Schiavone Constriction Co. Joint Venture, May 24, 2102)

The Old Croton Aqueduct



Flowable, self-leveling concrete (image: www.chaneyenterprises.com)

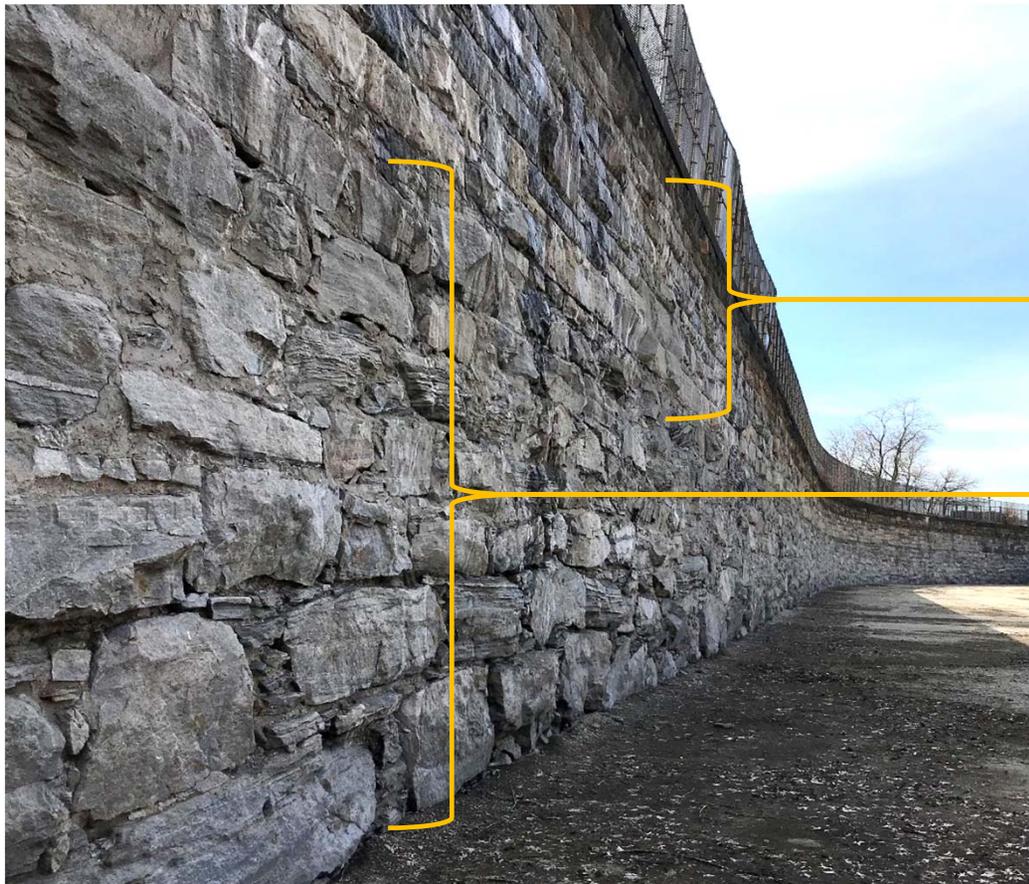


Need for Repairs: East Wall



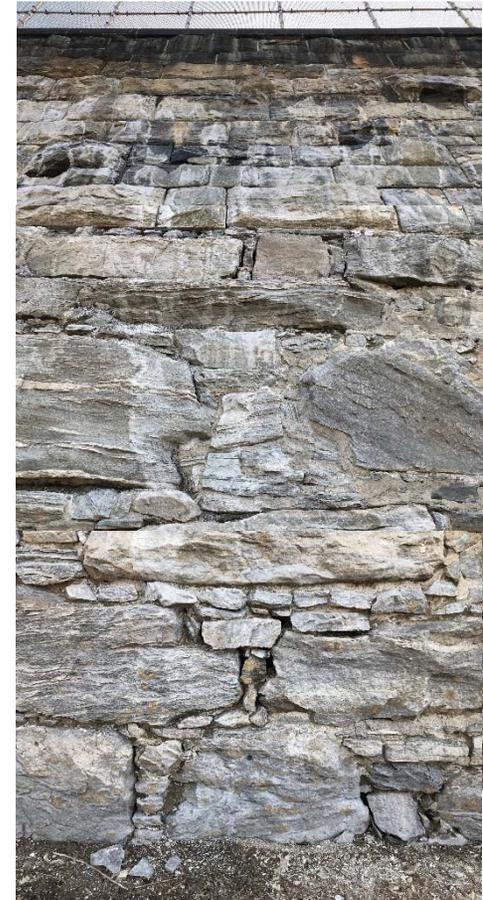
Leakage into the reservoir basin and severe deterioration of the east wall

Architectural Profile

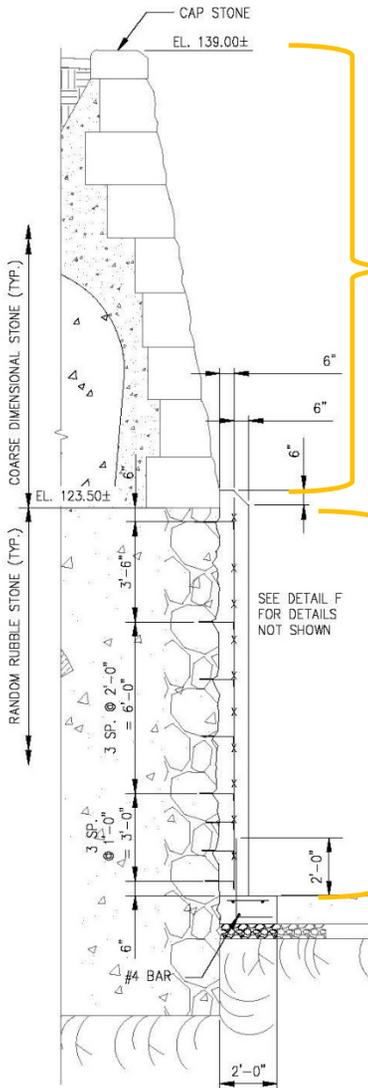


Dimensioned
stone with
cap stone:
15'-6" H

Rubble wall:
13'-6" H



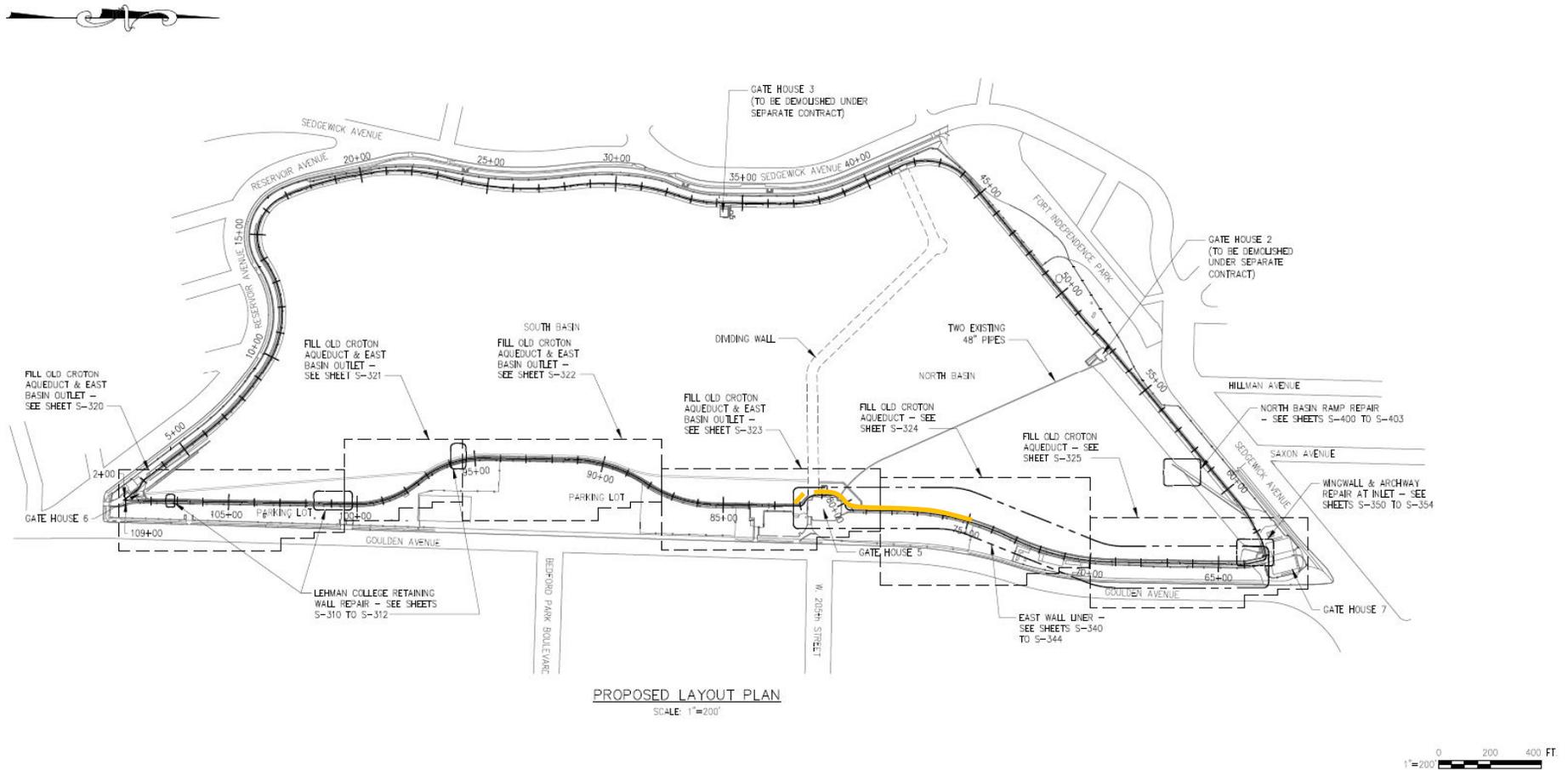
Stabilization Proposal



Repoint dimensioned stone and reset cap stone:

Install concrete liner wall over rubble wall

Original Proposal for Liner Wall

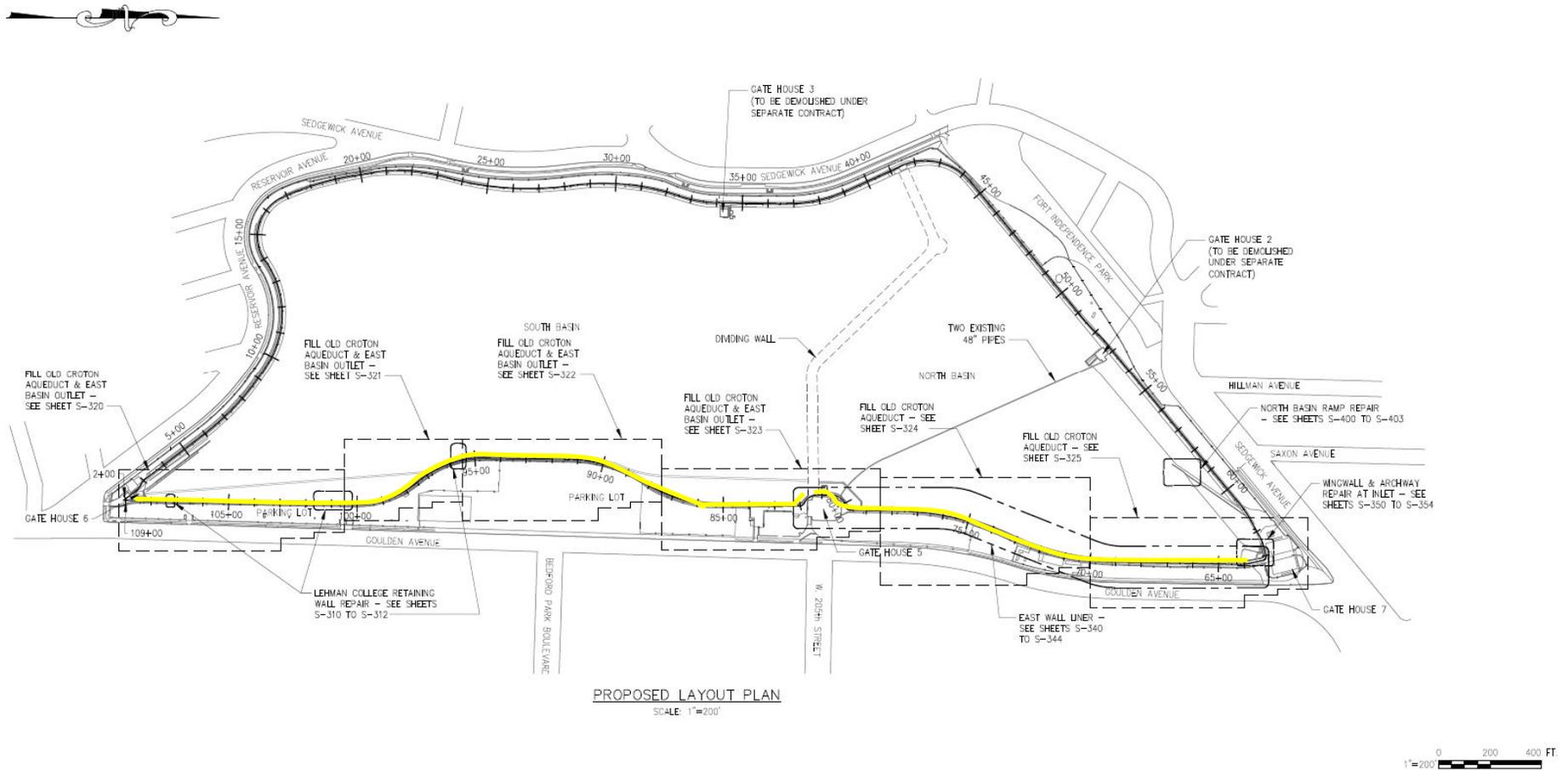


North basin: ~550 linear feet
South Basin: ~50 linear feet

Recent South Basin East Wall Failure



Revised Proposal for Extent of Liner Wall



North basin: ~1,750 linear feet
South Basin: ~2,725 linear feet

Change in Installation Method

Material Description	Wall Area (SF)	Unit Price w/ Markups	Total
Cast-in-Place	60,412	\$87.34	\$5.276M
Shotcrete	60,412	\$35.46	\$2.142M

Shotcrete Installation in NYC



Shotcrete Troweled Finish Example: East Side Access Tunnel, Manhattan
October 2015

Shotcrete Faux Stone Finishes



North Basin (Typical Drained Condition)



South Basin (Drained)



South Basin (Typical Filled Condition)



South Basin (Drained)



South Basin (Typical Filled Condition)



Added Scope: North Basin Ramp Upgrade



Existing



Proposed with support structure and guardrail